

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Original)An information recording medium on which there are recorded:

content information;

button information for defining a button menu which allows an operation as for said content information; and

play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other.

2. (Original)The information recording medium according to claim 1, wherein said play list information includes: item information for specifying each item which constitutes said content information; and sub item information for specifying said button information corresponding to the each item as a sub item.

3. (Original) The information recording medium according to claim 1, wherein at least one of the plurality of button pages includes button command information for defining the operation.

4. (Original)The information recording medium according to claim 1, wherein at least one of the plurality of button pages includes button control information being associated with at least one button image information which is displayed and outputted as the button menu, and for displaying and outputting the button image

information.

5. (Original)The information recording medium according to claim 4, wherein the button control information includes at least one of button image number information which indicates association with the button image information, display position information which indicates a display position on the button menu of a button defined by the button image information, and near-by button information which indicates a change in a state of the button caused by the operation.

6. (Original)The information recording medium according to claim 2, on which there is further recorded reproduction control information for controlling such that said button information specified by the sub item information is displayed, with it superimposed on or in place of one portion of said content information corresponding to said button information specified by the sub item information, or is not displayed at all, selectively in accordance with external specification, in reproduction.

7. (Original)The information recording medium according to claim 1, wherein said button information is recorded together with said content information, in a content space in which said content information is recorded and which occupies one area of a recording area.

8. (Original)The information recording medium according to claim 1, on which there is further recorded background image information for defining a background image on which the button menu is superimposed and displayed.

9. (Original)An information recording apparatus, comprising:
a first recording device for recording content information and button information for defining a button menu which allows an

operation as for said content information; and

a second record device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other.

10. (Original)The information recording apparatus according to claim 9, wherein said play list information includes: item information for specifying each item which constitutes said content information; and sub item information for specifying said button information corresponding to the each item as a sub item.

11. (Original)An information recording method, comprising:

a first recording process of recording content information and button information for defining a button menu which allows an operation as for said content information; and

a second record process of recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other.

12. (Currently Amended)An information reproducing apparatus for reproducing ~~said~~ an information recording medium on which there are recorded: content information; button information for defining a button menu which allows an operation as for said content information; and play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon

reproduction, said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other according to claim 1,

said information reproducing apparatus comprising:

a reproducing device for reproducing said content information, said menu information and said play list information;

a generating device for generating the button menu on the basis of said button information;

a designating device for designating one button page out of the plurality of button pages; and

a controlling device for controlling said generating device to generate the button menu constructed from the designated one button page.

13. (Original)The information reproducing apparatus according to claim 12, wherein said controlling device controls said reproducing device to reproduce said content information and said button information, in accordance with the item information and the sub item information included in said play list information reproduced by said reproducing device.

14. (Original)The information reproducing apparatus according to claim 12, wherein

said designating device is a button in which the button command information is defined, and

said controlling device controls said reproducing device and said generating device, in accordance with the button command information.

15. (Original)The information reproducing apparatus according to claim 12, wherein said reproducing device pre-loads said button information before reproduction of said content information.

16. (Original)The information reproducing apparatus according to

claim 12, further comprising a buffer memory for maintaining said generated button information.

17. (Currently Amended) An information reproducing method of reproducing information on ~~said~~ an information recording medium on which there are recorded: content information; button information for defining a button menu which allows an operation as for said content information; and play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction, said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other ~~according to claim 1,~~

said information reproducing method comprising:

a reproducing process of reproducing said content information, said menu information and said play list information;

a generating process of generating the button menu on the basis of said button information;

a designating process of designating one button page out of the plurality of button pages; and

a controlling process of controlling said generating process to generate the button menu constructed from the designated one button page.

18. (Original) An information recording / reproducing apparatus, comprising:

a first recording device for recording content information and button information for defining a button menu which allows an operation as for said content information; and

a second record device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said information recording / reproducing apparatus further comprising:

a reproducing device for reproducing said content information, said menu information and said play list information;

a generating device for generating the button menu on the basis of said button information;

a designating device for designating one button page out of the plurality of button pages; and

a controlling device for controlling said generating device to generate the button menu constructed from the designated one button page.

19. (Original) The information recording / reproducing apparatus according to claim 18, wherein

said play list information includes: item information for specifying each item which constitutes said content information; and sub item information for specifying said button information corresponding to the each item as a sub item, and

said controlling device controls said reproducing device to reproduce said content information and said button information, in accordance with the item information and the sub item information included in said play list information reproduced by said reproducing device.

20. (Original) An information recording / reproducing method, comprising:

a first recording process of recording content information and button information for defining a button menu which allows an operation as for said content information; and

a second record process of recording play list information for defining reproduction sequence of said content information by

a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said information recording / reproducing method further comprising:

a reproducing process of reproducing said content information, said menu information and said play list information;

a generating process of generating the button menu on the basis of said button information;

a designating process of designating one button page out of the plurality of button pages; and

a controlling process of controlling said generating process to generate the button menu constructed from the designated one button page.

21. (Currently Amended) A computer program product for record control to control a computer provided for ~~the~~ an information recording apparatus ~~according to claim 9~~, said computer program making the computer function as at least one portion of ~~said a~~ a first recording device and ~~said a~~ a second recording device,

said information recording apparatus comprising:

said first recording device for recording content information and button information for defining a button menu which allows an operation as for said content information; and

said second recording device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other.

22. (Currently Amended) A computer program product for reproduction control to control a computer provided for ~~the~~ an information reproducing apparatus ~~according to claim 12~~, said computer program making the computer function as at least one portion of ~~said a~~ reproducing device, ~~said a~~ generating device, ~~said a~~ designating device and ~~said a~~ controlling device,

said information reproducing apparatus for reproducing said an information recording medium on which there are recorded: content information; button information for defining a button menu which allows an operation as for said content information; and play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction, said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said information reproducing apparatus comprising:

said reproducing device for reproducing said content information, said menu information and said play list information;

said generating device for generating the button menu on the basis of said button information;

said designating device for designating one button page out of the plurality of button pages; and

said controlling device for controlling said generating device to generate the button menu constructed from the designated one button page.

23. (Currently Amended) A computer program product for record reproduction control to control a computer provided for ~~the~~ an information recording / reproducing apparatus ~~according to claim 18~~, said computer program making the computer function as at least one portion of ~~said a~~ first recording device, ~~said a~~ second recording device, ~~said a~~ reproducing device, ~~said a~~

generating device, ~~said~~ a designating device and said a
controlling device,

said information recording / reproducing apparatus
comprising:

said first recording device for recording content information
and button information for defining a button menu which allows an
operation as for said content information; and

said second record device for recording play list information
for defining reproduction sequence of said content information by
a unit of item, which constitutes said content information and
which is accessible upon reproduction,

said button information including a plurality of button pages
each of which can constitute the button menu and whose display can
be changed to each other,

said information recording / reproducing apparatus further
comprising:

said reproducing device for reproducing said content
information, said menu information and said play list information;

said generating device for generating the button menu on the
basis of said button information;

said designating device for designating one button page out
of the plurality of button pages; and

said controlling device for controlling said generating
device to generate the button menu constructed from the
designated one button page.

24. (Original) A data structure including a control signal,
comprising:

content information;

button information for defining a button menu which allows
an operation as for said content information; and

play list information for defining reproduction sequence
of said content information by a unit of item, which constitutes
said content information and which is accessible upon

reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other.